CLAIMS:

1. A method of inhibiting an LPS-dependent inflammatory processes in a patient infected with a bacterium comprising administering to said patient an amount of recombinant human uteroglobin sufficient to inhibit said inflammatory processes.

2. The method of claim 84 wherein said patient is diagnosed with septic shock.

3. The method of claim 84 wherein said patient is diagnosed with pneumonia.

4. The method of claim 84 wherein said patient is diagnosed with a condition selected form the group consisiting of: peritonitis, colitis, inflammatory bowel disease, pancreatitis, nephritis, vasculitis, hepatitis, sinusitis, cystitis, peridontal disease, and myocarditis.

5. The method of claim 84 wherein said patient is diagnosed with asthma.

6. A composition comprising recombinant human uteroglobin in an amount sufficient to inhibit LPS-dependent inflammatory processes in a patient, and a pharmaceutically acceptable carrier or diluent.

7. The composition of claim 6 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

8. A method of decreasing TNF-alpha concentrations in vivo in a patient in need of such treatment comprising administering to said patient an amount of recombinant human uteroglobin sufficient to decrease said TNF-alpha concentrations.

9. The method of claim 8 wherein said patient is diagnosed with a bacterial infection.

10. The method of claim 8 wherein said patient is diagnosed with inflammatory disease.

11. The method of claim 8 wherein said patient is diagnosed with Crohn's disease.

12. The method of claim 8 wherein said patient is diagnosed with a condition selected form the group consisiting of: peritonitis, colitis, inflammatory bowel disease, pancreatitis, nephritis, vasculitis, hepatitis, sinusitis, cystitis, peridontal disease, and myocarditis.

13. A composition comprising recombinant human uteroglobin in an amount sufficient to decrease TNF-alpha concentrations and a pharmaceutically acceptable carrier or diluent.

14. The composition of claim 13 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

15. A method of regulating the nitric oxide pathway for relaxing smooth muscle cells in a patient in need of such treatment comprising administering to said patient an amount of recombinant human uteroglobin sufficient to regulate said nitric oxide pathway.

16. The method of claim 15 wherein said patient is diagnosed with abnormal blood pressure.

17. The method of claim 15 wherein said patient is diagnosed with high blood pressure.

18. The method of claim 15 wherein said patient is diagnosed with bronchoconstriction.

19. The method of claim 15 wherein said patient is diagnosed with respiratory distress syndrome.

20. The method of claim 15 wherein said patient is diagnosed with esophageal dysphagia.

21. The method of claim 15 wherein said patient is diagnosed with ileus.

22. The method of claim 15 wherein said patient is diagnosed with rectal prolapse.

23. A composition comprising recombinant human uteroglobin in an amount sufficient to regulate the nitric oxide pathway of a patient, and a pharmaceutically acceptable carrier or diluent.

24. The composition of claim 23 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

25. A method of regulating vascular permeability in a patient in need of such treatment comprising administering to said patient an amount of recombinant human uteroglobin sufficient to regulate said vascular permeability.

26. The method of claim 25 wherein said patient is diagnosed with abnormal blood pressure.

27. The method of claim 25 wherein said patient is diagnosed with high blood pressure.

28. The method of claim 25 wherein said patient is diagnosed with primary pulmonary hypertension.

29. The method of claim 25 wherein said patient is diagnosed with congestive heart failure.

30. The method of claim 25 wherein said patient suffers from edema.

31. A composition comprising recombinant human uteroglobin in an amount sufficient to regulate vascular permeability of a patient, and a pharmaceutically acceptable carrier or diluent.

32. The composition of claim 31 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

33. A method of suppressing proliferation of CD71-positive cells in a patient in need of such treatment comprising administering to said patient an amount of recombinant human uteroglobin sufficient to suppress proliferation of said cells.

34. A method of claim 33 wherein said patient is diagnosed with a leukemia.

35. A method of claim 33 wherein said patient is diagnosed with a lymphoma.

36. A method of claim 33 wherein said patient is diagnosed with an inflammatory disease.

37. The method of claim 33 wherein said patient is diagnosed with an infectious disease.

38. A method of claim 33 wherein said patient is diagnosed with a fibrotic disease.

39. A method of claim 33 wherein said patient is diagnosed with an autoimmune disease.

40. A method of claim 33 wherein said patient is diagnosed with cancer.

41. A method of claim 33 wherein said cells are selected from the group consisting of: neutrophils, band cells, stab cells, granulocytes, eosinophils, basophils, monocytes, macrophages, lymphocytes, erythrocytes, megakaryocytes, T cells, B cells, NK cells, lymphoid precursors, and myeloid precursors.

42. A composition comprising recombinant human uteroglobin in an amount sufficient to suppress proliferation of CD71 positive cells in a patient, and a pharmaceutically acceptable carrier or diluent.

43. The composition of claim 42 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

44. A method of suppressing proliferation of CD71-positive cells in vitro comprising exposing said CD71-positive cells to an amount of recombinant human uteroglobin sufficient to suppress proliferation of said cells in vitro.

45. The method of claim 44 wherein said CD71-positive cells are hematopoietic stem cells.

46. The method of claim 44 wherein said hematopoietic stem cells are transplanted from a donor to a recipient in need of such cells.

47. The method of claim 44 wherein said hematopoietic stem cells must be stored for a period of time prior to transplant.

48. The method of claim 44 wherein said CD71-positive cells are lymphoid precursor cells.

49. The method of claim 44 wherein said CD71-positive cells are myeloid precursor cells.

50. The method of claim 44 wherein said cells are selected from the group consisting of: neutrophils, band cells, stab cells, granulocytes, eosinophils, basophils, monocytes, macrophages, lymphocytes, erythrocytes, megakaryocytes, T cells, B cells, NK cells, lymphoid precursors, and myeloid precursors.

51. A composition comprising recombinant human uteroglobin in an amount sufficient to suppress proliferation of CD71 positive cells in vitro.

52. The composition of claim 51 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

53. A method of suppressing proliferation of CD71-positive cells in vitro comprising exposing said CD71-positive cells to an amount of recombinant human uteroglobin and and an amount of fibronectin sufficient to suppress proliferation of said cells in vitro.

54. The method of claim 53 wherein said CD71-positive cells are hematopoietic stem cells.

55. The method of claim 53 wherein said hematopoietic stem cells are transplanted from a donor to a recipient in need of such cells.

56. The method of claim 53 wherein said hematopoietic stem cells must be stored for a period of time prior to transplant.

57. The method of claim 53 wherein said CD71-positive cells are lymphoid precursor cells.

58. The method of claim 53 wherein said CD71-positive cells are myeloid precursor cells.

59. The method of claim 53 wherein said cells are selected from the group consisting of: neutrophils, band cells, stab cells, granulocytes, eosinophils, basophils, monocytes, macrophages, lymphocytes, erythrocytes, megakaryocytes, T cells, B cells, NK cells, lymphoid precursors, and myeloid precursors.

60. A composition comprising recombinant human uteroglobin and fibronectin, each present in an amount sufficient to suppress proliferation of CD71 positive cells in a patient, and a pharmaceutically acceptable carrier or diluent.

61. The composition of claim 60 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

62. A method of suppressing activation of CD71-positive cells in a patient in need of such treatment comprising administering to said patient an amount of recombinant human uteroglobin sufficient to suppress activation of said cells.

63. The method of claim 62 wherein said patient is diagnosed with an inflammatory disease.

64. The method of claim 62 wherein said patient is diagnosed with an infectious disease.

65. The method of claim 62 wherein said patient is diagnosed with an autoimmune disease.

66. The method of claim 62 wherein said patient is diagnosed with cancer.

67. The method of claim 62 wherein said patient is diagnosed with a fibrotic disease.

68. A method of claim 62 wherein said cells are selected from the group consisting of: neutrophils, band cells, stab cells, granulocytes, eosinophils, basophils, monocytes, macrophages, lymphocytes, erythrocytes, megakaryocytes, T cells, B cells, NK cells, lymphoid precursors, and myeloid precursors.

69. A composition comprising recombinant human uteroglobin in an amount sufficient to suppress activation of CD71 positive cells in a patient, and a pharmaceutically acceptable carrier or diluent.

70. The composition of claim 69 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

71. A method of suppressing activation of CD71-positive cells in vitro comprising exposing said cells to an amount of recombinant human uteroglobin sufficient to suppress activation of said cells in vitro.

72. The method of claim 71 wherein said CD71-positive cells are hematopoietic stem cells.

73. The method of claim 72 wherein said hematopoietic stem cells are to be transplanted from a donor to a recipient in need of such cells.

74. The method of claim 73 wherein said hematopoietic stem cells are stored for a period of time prior to transplant.

75. The method of claim 71 wherein said CD71-positive cells are lymphoid precursor cells.

76. The method of claim 71 wherein said CD71-positive cells are myeloid precursor cells.

77. The method of claim 71 wherein said cells are selected from the group consisting of: neutrophils, band cells, stab cells, granulocytes, eosinophils, basophils, monocytes, macrophages, lymphocytes, erythrocytes, megakaryocytes, T cells, B cells, NK cells, lymphoid precursors, and myeloid precursors.

78. A composition comprising recombinant human uteroglobin in an amount sufficient to suppress activation of CD71 positive cells in vitro.

79. The composition of claim 78 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

80. A method of enhancing proliferation of CD11b-positive cells in a patient in need of such treatment comprising administering to said patient an amount of recombinant human uteroglobin sufficient to enhance proliferation of said cells.

81. The method of claim 80 wherein said patient is diagnosed with a leukemia.

82. The method of claim 80 wherein said patient is diagnosed with a lymphoma.

83. The method of claim 80 wherein said patient is diagnosed with an inflammatory disease.

84. The method of claim 80 wherein said patient is diagnosed with an infectious disease.

85. The method of claim 80 wherein said patient is diagnosed with a fibrotic disease.

86. The method of claim 80 wherein said patient is diagnosed with an autoimmune disease.

87. The method of claim 80 wherein said patient is diagnosed with cancer.

88. The method of claim 80 wherein said cells are selected from the group consisting of: neutrophils, band cells, stab cells, granulocytes, eosinophils, basophils, monocytes, macrophages, lymphocytes, erythrocytes, megakaryocytes, T cells, B cells, NK cells, lymphoid precursors, and myeloid precursors.

89. A composition comprising recombinant human uteroglobin in an amount sufficient to enhance proliferation of CD11b-positive cells in a patient, and a pharmaceutically acceptable carrier or diluent.

90. The composition of claim 89 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

91. A method of enhancing proliferation of CD11b-positive cells in vitro comprising exposing said cells to an amount of recombinant human uteroglobin sufficient to enhance proliferation of said cells in vitro.

92. The method of claim 91 wherein said CD11b-positive cells are hematopoietic stem cells.

93. The method of claim 92 wherein said hematopoietic stem cells are to be transplanted from a donor to a recipient in need of such cells.

94. The method of claim 93 wherein said hematopoietic stem cells are stored for a period of time prior to transplant.

95. The method of claim 91 wherein said CD11b-positive cells are lymphoid precursor cells.

96. The method of claim 91 wherein said CD11b-positive cells are myeloid precursor cells.

97. The method of claim 91 wherein said cells are selected from the group consisting of: neutrophils, band cells, stab cells, granulocytes, eosinophils, basophils, monocytes, macrophages, lymphocytes, erythrocytes, megakaryocytes, T cells, B cells, NK cells, lymphoid precursors, and myeloid precursors.

98. A composition comprising recombinant human uteroglobin in an amount sufficient to enhance proliferation of CD11b-positive cells in vitro.

99. The composition of claim 98 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

100. A method of enhancing activation of CD11b-positive cells in a patient in need of such treatment comprising administering to said patient an amount of recombinant human uteroglobin sufficient to enhance activation of said cells.

101. The method of claim 100 wherein said patient is diagnosed with an inflammatory disease.

102. The method of claim 100 wherein said patient is diagnosed with an infectious disease.

103. The method of claim 100 wherein said patient is diagnosed with an autoimmune disease.

104. The method of claim 100 wherein said patient is diagnosed with cancer.

105. The method of claim 100 wherein said patient is diagnosed with a fibrotic disease.

106. A method of claim 100 wherein said cells are selected from the group consisting of: neutrophils, band cells, stab cells, granulocytes, eosinophils, basophils, monocytes, macrophages, lymphocytes, erythrocytes, megakaryocytes, T cells, B cells, NK cells, lymphoid precursors, and myeloid precursors.

107. A composition comprising recombinant human uteroglobin in an amount sufficient to enhance activation of CD11b-positive cells in a patient, and a pharmaceutically acceptable carrier or diluent.

108. The composition of claim 107 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

109. A method of enhancing activation of CD11b-positive cells in vitro comprising exposing said cells to an amount of recombinant human uteroglobin sufficient to enhance activation of said cells in vitro.

110. The method of claim 109 wherein said CD11b-positive cells are hematopoietic stem cells.

111. The method of claim 110 wherein said hematopoietic stem cells are to be transplanted from a donor to a recipient in need of such cells.

112. The method of claim 111 wherein said hematopoietic stem cells are stored for a period of time prior to transplant.

113. The method of claim 109 wherein said CD71-positive cells are lymphoid precursor cells.

114. The method of claim 109 wherein said CD71-positive cells are myeloid precursor cells.

115. The method of claim 109 wherein said cells are selected from The group consistin of: neutrophils, band cells, stab cells, granulocytes, eosinophils, basophils, monocytes,

macrophages, lymphocytes, erythrocytes, megakaryocytes, T cells, B cells, NK cells, lymphoid precursors, and myeloid precursors.

116. A composition comprising recombinant human uteroglobin in an amount sufficient to enhance activation of CD11b-positive cells in vitro.

117. The composition of claim 116 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

118. A method of inhibiting migration of vascular endothelial cells comprising administering recombinant human uteroglobin to a patient in need of such treatment in an amount sufficient to inhibit migration of said cells.

119. The method of claim 118 wherein said patient has been diagnosed with a primary cancer.

120. The method of claim 119 wherein the recombinant human uteroglobin inhibits or prevents metastatis of the primary cancer.

121. The method of 118 wherein said patient has been diagnosed with a diabetic condition.

122. The method of 118 wherin the recombinant human uteroglobin inhibits or prevents retinopathy.

123. A composition comprising recombinant human uteroglobin in an amount sufficient to suppress migration of vascular endothelial cells in a patient, and a pharmaceutically acceptable carrier or diluent.

124. The composition of claim 123 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

125. A method of inhibiting angiogenesis in a patient in need of such treatment comprising administering to said patient an amount of recombinant human uteroglobin sufficient to inhibit angiogenesis.

126. A composition comprising recombinant human uteroglobin in an amount sufficient to inhibit angiogenesis in a patient, and a pharmaceutically acceptable carrier or diluent.

127. The composition of claim 126 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

128. A method of inhibiting migration of vascular endothelial cells in a patient in need of such treatment comprising administering to said patient recombinant human uteroglobin and

fibronectin or a fragment derived from fibronectin in amounts sufficient to inhibit migration of said cells.

129. A composition comprising recombinant human uteroglobin and fibronectin, or a fragment derived from fibronectin, in amounts sufficient to suppress migration of vascular endothelial cells in a patient, and a pharmaceutically acceptable carrier or diluent.

130. The composition of claim 129 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

131. A method of inhibiting angiogenesis in a patient in need of such treatment comprising administering to said patient recombinant human uteroglobin and fibronectin, or a fragment derived from fibronectin, in amounts sufficient to inhibit angiogenesis.

132. A composition comprising recombinant human uteroglobin and fibronectin or a fragment derived from fibronectin in amounts sufficient to inhibit angiogenesis in a patient, and a pharmaceutically acceptable carrier or diluent.

133. The composition of claim 132 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

134. A method of inhibiting extracellular matrix invasion by vascular endothelial cells in a patient in need of such treatment comprising administering to said patient an amount of recombinant human uteroglobin sufficient to inhibit extracellular matrix invasion of said cells.

135. A composition comprising recombinant human uteroglobin in an amount sufficient to extracellular matrix invasion by vascular endothelial cells in a patient, and a pharmaceutically acceptable carrier or diluent.

136. The composition of claim 135 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

137. A method of inhibiting extracellular matrix invasion by vascular endothelial cells in a patient in need of such treatment comprising administering to said patient recombinant human uteroglobin and fibronectin or a fragment derived from fibronectin in amounts sufficient to inhibit extracellular matrix invasion.

138. A composition comprising recombinant human uteroglobin and fibronectin or a fragment derived from fibronectin in amounts sufficient to inhibit extracellular matrix invasion by vascular endothelial cells in a patient, and a pharmaceutically acceptable carrier or diluent.

139. The composition of claim 138 wherein said amount of recombinant human uteroglobin is 10 ng/kg - 25 mg/kg.

140. A method of regulating signal transduction in uteroglobin-responsive cells said method comprising exposing said cells to recombinant human uteroglobin, wherein said signal transduction is mediated by CD148 and CD148 immunoreactive proteins.

141. The method of claim 140 further comprising exposing said cells to fibronectin or a fibronectin immunoreactive protein.

142. The method of claim 140 wherein arachidonic acid metabolism is regulated.

143. The method of claim 140 wherein nitric oxide metabolism is regulated.

144. The method of claim 140 wherein the cell cycle is regulated

145. The method of claim 140 wherein cell adhesion molecule and/or integrin expression is regulated.

146. A method of regulating cellular activities mediated by CD148 and CD148 immunoreactive proteins comprising exposing the cells to recombinant human uteroglobin.

147. The method of claim 146 further comprising exposing said cells to fibronectin or a fibronectin immunoreactive protein.

148. The method of claim 146 wherein cellular adhesion is regulated.

149. The method of claim 146 wherein cellular metabolism is regulated.

150. The method of claim 146 wherein cellular migration is regulated.

151. The method of claim 146 wherein cellular proliferation is regulated.

152. The method of claim 146 wherein cellular extracellular matrix invasion is regulated.

153. The method of claim 146 wherein angiogenesis is regulated.

154. The method of claim 146 wherein cellular differentiation is regulated.

155. A method of regulating signal transduction in uteroglobin-responsive cells said method comprising exposing said cells to recombinant human uteroglobin, wherein said signal transduction is mediated by PLA2 receptors and PLA2 immunoreactive proteins.

156. The method of claim 155 further comprising exposing said cells to fibronectin or a fibronectin immunoreactive protein.

157. The method of claim 155 wherein arachidonic acid metabolism is regulated.

158. The method of claim 155 wherein nitric oxide metabolism is regulated.

159. The method of claim 155 wherein the cell cycle is regulated

160. The method of claim 155 wherein cell adhesion molecule and/or integrin expression is regulated.

161. A method of regulating cellular activities mediated by CD148 and CD148 immunoreactive proteins comprising exposing the cells to recombinant human uteroglobin.

162. The method of claim 161 further comprising exposing said cells to fibronectin or a fibronectin immunoreactive protein.

163. The method of claim 161 wherein cellular adhesion is regulated.

164. The method of claim 161 wherein cellular metabolism is regulated.

165. The method of claim 161 wherein cellular migration is regulated.

166. The method of claim 161 wherein cellular proliferation is regulated.

167. The method of claim 161 wherein cellular extracellular matrix invasion is regulated.

168. The method of claim 161 wherein angiogenesis is regulated.

169. The method of claim 161 wherein cellular differentiation is regulated.

170. A method of identifying proteins that interact with each other, in which at least one protein contains at least one four helical bundle motif and at least one protein having at least one fibronectin Type III domain comprising mapping a pathway involving one or more protein interactions.

171. The method of claim 170 wherein the pathway is physiological.

172. The method of claim 170 wherein the pathway is pathological.

173. The method of claim 170 wherein the pathway is pharmacological.

174. The method of claim 170 wherein receptors for rhUG and UG-like proteins are identified.

175. The method of claim 170 wherein receptors for fibronectin and fibronectin immunoreactive proteins are identified.

176. The method of claim 170 wherein receptors for proteins containing a four helical bundle motif are identified.

177. The method of claim 170 wherein receptors for proteins containing a fibronectin Type III domain are identified.

178. The method of claim 170 wherein ligands for proteins containing a four helical bundle motif are identified.

179. The method of claim 170 wherein ligands for proteins containing a fibronectin Type III domain are identified.

180. The method of claim 170 whereinligands for CD148 and CD148 immunoreactive proteins are identified.

181. The method of claim 170 wherein proteins with which rhUG and rhUG-like proteins can form a complex are identified.

182. The method of claim 170 wherein proteins with which fibronectin and fibronectin immunoreactive proteins can form a complex are identified.

183. The method of claim 170 wherein proteins bearing fibronectin Type III repeats are identified, wherein said proteins are selected from the group consisting of: fibronectin, CD148, collagens, titins, tenascins, cytotactins, fibrin, cell adhesion molecules, integrins, protein tyrosine phosphatases, and others.

184. The method of claim 170 wherein proteins bearing four helical bundle motifs are identified, wherein said proteins are selected from the group consisting of: UG-like proteins, the secretory PLA2 protein family (including all subtypes), the annexins, and others.

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